SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

SITE ID 283: EAGLE METALCRAFT, INC.

SITE SUMMARY REPORT

Onondaga Lake Project
Task 5: 104(e) Review

Site No. 734030-002
Work Assignment Number D003060-27

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CONTENTS

CONTENTS (Continued)

TABLES

FIGURES

1.0 SITE DESCRIPTION

The information referenced in this report was mainly obtained from the 104(e) responses of Eagle Metalcraft, Inc. (Eagle Metalcraft, Company ID 2037). Two mailings were received from Eagle Metalcraft dated September 18, 1996 and May 14, 1998. The supplemental response was based on NYSDEC's April 14, 1998 request for additional information. Information obtained from other sources is noted, as necessary.

1.1 Location

The Eagle Metalcraft facility is located at 3550 Burnet Avenue in East Syracuse, New York in Onondaga County. Figure 1 shows the location of the facility in relation to Onondaga Lake. The site is bound by Burnet Avenue to the north, Thompson Road to the west and southwest, and Robert Street to the east. The site location is shown on the USGS topographic map in Figure 2. Based on a facility map (Figure 3) that was submitted by Eagle Metalcraft (Mailing No. 1, p. 000017), the facility is approximately one acre in size. Although property boundaries were not indicated in their submitted mailings, Eagle Metalcraft stated that their southern property line was 10 to 30 ft south of their facility (Mailing No. 2, p. 5).

1.2 Geology

The surficial geology of the Syracuse area was strongly influenced by the most recent glacial advance (Wisconsin age, 12,000 to 14,500 years ago). The area occupies a region that was covered by Lake Iroquois, a large glacial lake situated in front of the ice margin. The broad flat-lying plains situated north from Syracuse to Lake Ontario were formed beneath Lake Iroquois and are characterized by lacustrine fine sand and silt deposits. Additional glacial features common to the region are moraines, drumlins, U-shaped valleys, and meltwater channels.

Onondaga Lake and all its major tributaries lie within glacial meltwater channels. These features originally were conduits carrying meltwater at large volumes and high velocities away from the glacier. Sediment types characteristically found in meltwater channels are sands and gravels. These relict features form important water bearing and transmitting units which form an irregularly branching, net-like pattern.

The bedrock geology of the greater Syracuse area includes Lower to Middle Paleozoic age sedimentary rocks predominated by carbonate (dolostone and limestone) and shale, and containing some sandstone, siltstone, and evaporites. Bedrock directly beneath the area (as well as underneath Onondaga Lake) is Silurian Vernon Shale (Rickard and Fischer, 1970) which has low permeability, but does possess secondary porosity due to fractures. Soil boring logs were not provided by Eagle Metalcraft.

Based on Eagle Metalcraft's submitted mailings, their property is located in a flat area with clayey soil that does not drain well (Mailing No. 2, p. 5). The USDA Soil Survey of Onondaga County classifies the area's soil type as urban land, Rhinebeck silt loam, and cut and fill land (USDA, 1977).

1.3 Hydrogeology

According to the Syracuse East USGS quadrangle map, the ground surface elevation at the Eagle Metalcraft site is approximately 415 feet NGVD (see Figure 2). Groundwater elevation data were not provided by Eagle Metalcraft. Shallow groundwater is expected to flow towards to the east and southeast based on the ground surface contours shown on the USGS map for the area. It was noted on page 5 of Eagle Metalcraft's second mailing that there is an isolated wetland area along the southern border of the property. This would imply a saturated soil condition for at least part of the year, but it is unclear whether this is a result of a shallow water table or from excessive runoff from the nearby I-690 roadway. A map of the wetland area was not provided by Eagle Metalcraft.

1.4 Surface Water Hydrology

The Eagle Metalcraft property is located approximately 4.7 miles east of the southeastern shore of Onondaga Lake, and less than 1,000 feet west of the South Branch of Ley Creek. The adjacent area of the South Branch of Ley Creek is approximately 6.8 miles upstream of Onondaga Lake. Measures taken to prevent off-site contamination from surface runoff (i.e., berms, vegetated swales), if any, were not indicated in Eagle Metalcraft's submittal. The facility is situated directly adjacent to Burnet Avenue (Figure 1) which runs west and east at this location. There are "no storm sewer conveyances constructed on the site, and storm water leaves the site toward Burnet Avenue and adjacent properties. On the southern border of the property, there is an isolated wetland created by the Thompson Road exit ramp from I-690. Presumably, some storm runoff flows to this isolated wetland. The remainder is either absorbed into the ground or flows offsite. There is a gutter that runs along the south side of Burnet Avenue that collects storm runoff toward the street from the front of the facility" (Mailing No. 2, pp. 5-6). The asphalt gutter that runs parallel to Burnet Avenue is shown on the submitted facility map (Figure 3). The facility map also shows a blacktop parking lot on the north side of the building but no other outdoor facilities except two loading areas. During winter months and periods of heavy rainfall, stormwater pools in the facility's parking areas (Mailing No. 2, p. 5). Eagle Metalcraft is not aware of any changes in stormwater runoff patterns that have occurred since they began operation at the site (Mailing No. 2, p. 6).

There was no indication that a New York State Pollutant Discharge Elimination System (SPDES) Permit was required for their facility. As noted in Section 1.3, Eagle Metalcraft indicated that a wetland area exists along the southern border of the site. The size of this wetland area was not indicated.

2.0 SITE HISTORY

2.1 Owners/Operators

Eagle Metalcraft has been in operation at its current location of 3550 Burnet Avenue in East Syracuse, New York in Onondaga County since 1953 (Mailing No. 1, p. 000004).

2.2 Site Operations

Eagle Metalcraft (SIC code 3400, EPA RCRA ID #NYD002240851) is a metal fabricating job shop with seventeen employees that has been in existence since 1953. The facility builds a wide variety of sheet metal parts/assemblies including chassis, panels, and brackets for medical, electrical, and communications industries. The facility processes, as described in Eagle Metalcraft's mailings, are listed below, and details regarding the types and quantities of wastes that are generated are provided in Section 2.3.

- Sheet metal fabrication at this facility involves shearing, punching, forming, welding, and assembly, all of which do not generate hazardous wastes.

- A painting department was constructed in 1962 and included a "paint spray booth for spraying solvent-based paints and a batch-type bake oven" (Mailing No. 1, p. 000006). Painting operations were expanded to include a second paint spray booth, which is assumed to have occurred in 1969 based on an Eagle Metalcraft statement on page 4 of Mailing No. 2. The facility currently has one employee who normally spends 20 to 25 hours weekly spraying parts in the spray booths. In September 1989, a solvent distillation unit was integrated into the painting system that enabled the facility to use recycled solvents to clean the facility's paint guns and hoses. Prior to that time, a greater quantity of leftover paint waste and waste paint solvents were generated and stored at the facility, and then disposed off-site. On May 31, 1996, a

powder-coating paint system was purchased which replaced the existing solvent-based painting system in one of the two spray booths. At the time of their first submittal (September 18, 1996), Eagle Metalcraft only had a few months of experience using this powder system, but it was indicated that powder coatings should "significantly reduce the environmental problems normally associated with solvent-based paints" (Mailing No. 1, p. 000007). It was also noted that since 1994, several of Eagle Metalcraft's customers had switched from solvent-based paints to water-based paints.

- The facility uses a cleaning and pre-painting process that involves a "series of liquid immersion tanks used to clean and/or add chemical films or coatings to the parent metal" (Mailing No. 1, p. 000005). The chemical films provide corrosion protection and/or facilitate paint adhesion. An iron-phosphate coating is used for steel products, and an iriditing process (application of a chromate conversion coating) is used for aluminum. Both of these processes use tanks of water-soluble chemicals, with each tank using a "cold water overflow rinse tank." The process tanks typically run between 90 and 110 working days annually. This system was installed in 1962, and has not changed since that time (Mailing No. 1, p. 000005).

- Although materials storage areas/facilities were not indicated on the facility map (Figure 3), it is possible that chemicals and other materials have been stored on-site. On page 4 of Eagle Metalcraft's second mailing, a paint storage area was noted to exist "in the rear of the facility." There was no additional information provided about this storage area, including its exact location, ground surface perviousness, and dimensions. The storage area's period of operation is assumed to be from 1962 (when the paint shop was installed) to the present, but this was not explicitly stated by Eagle Metalcraft.

2.3 Generation and Disposal of Wastes

The hazardous and non-hazardous wastes that have been generated from the operations that were discussed in Section 2.2 are listed below. This information was obtained from Eagle Metalcraft's first and second mailings. During the period between 1953 and 1983, submitted information was based on employee interviews (Mailing No. 2, p. 4).

- The iron-phosphate coating for steel and the iriditing process for aluminum each requires the use of "several water-soluble chemical tanks with each tank followed by a cold water overflow rinse tank" (Mailing No. 1, p. 000005). The tank locations, capacities, and spill prevention procedures were not indicated. Overflow water from the rinse tanks is discharged directly into the Onondaga County Department of Drainage and Sanitation (OCDDS) sanitary sewer system for treatment at the Metropolitan Syracuse Wastewater Treatment Facility. The overall cleaning/prepaint process and the chemicals used have remained the same since the system was installed in 1962.

  The OCDDS industrial wastewater discharge permit (OCDDS Permit No. 25) which was valid between June 14, 1993 and June 14, 1996 was provided by Eagle Metalcraft. It authorized the discharge of process wastewaters and sanitary wastewater (Mailing No. 1, pp. 000018-000038). A draft version of the facility's most recent OCDDS permit was provided (the proposed starting date was May 15, 1996), as well as a letter from OCDDS which extended the permit's expiration date until the new permit could be executed (Mailing No. 1, pp. 000039-000069). Although OCDDS permits prior to 1993 were not provided, Eagle Metalcraft indicated that the "only discharge of the wastewater associated with our cleaning/prepaint process has always been directly into the sanitary sewer" (Mailing No. 1, p. 000010). It should be noted that the OCDDS permits state that the metal finishing and electroplating wastewaters are to be pretreated before discharge into the

municipal sewage system (Mailing No. 1, pp. 000022, 000042), while on page 000010 of Mailing No. 1, Eagle Metalcraft stated that the effluent has not been pretreated but is still consistently within permit guidelines.

Biannual self-monitoring effluent reports are kept on file at the facility and it was noted in their submittal that they are available for inspection upon request (Mailing No. 1, p. 000006). The only such report that was provided was for the period between January 1, 1996 and June 30, 1996 (Mailing No. 1, pp. 000070-000096). Analytical monitoring data that were obtained by OCDDS (originally used to calculate Eagle Metalcraft's 1995 wastewater surcharge bill) were also provided (Mailing No. 1, pp. 000109-000111). Metal concentrations data from both of these reports are presented below in Table 1. The detections of metals were found to be below OCDDS concentration limitations. In addition to metals data, these reports provide measurements of total cyanide, amenable cyanide, total phenols, oil and grease, total suspended solids, nitrogen, phosphorus, biochemical oxygen demand, and pH which were also within OCDDS effluent limitations (Mailing No. 1, pp. 000024-000025, 000044-000045). Effluent flowrate measurements were provided for four days in May and June 1996, and ranged from 3.8 to 11.3 gallons per minute (gpm), with an average of 8.6 gpm (Mailing No. 1, p. 000073).

It was noted in a 1996 letter from Eagle Metalcraft that their company was abiding by a "Toxic Organic Pollutant Management Plan" that they submitted to OCDDS on January 28, 1993 (Mailing No. 1, p. 000097). However, this document was not available at the time this Site Summary Report was written.

- There are three sources of contaminated air emissions currently associated with the painting department, including two paint spray booths that are used for spraying solvent-based paints, and a batch-type bake oven. The emitted wastes primarily consist of evaporated solvents/thinners. The approximate quantities of materials purchased associated with these operations are 600 to 800 gallons (gals) per year of

Table 1: Metal Concentrations of Discharged Wastewater Effluent to OCDDS Sanitary Sewer

Metals	5/23/96 Sample[1] (mg/L)	5/30/96 Sample[1] (mg/L)	6/3/96 Sample[1] (mg/L)	6/4/96 Sample[1] (mg/L)	1995 Samples[2] (mg/L)	OCDDS Limitations[3] (mg/L)
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	0.004 (13)	1.2
Chromium-Total	0.96	< 0.05	0.4	0.41	1.21 (13)	8.0
Chromium-Hexavalent	-	-	-	0.17	0.838 (7)	4.0
Copper	0.08	< 0.02	0.02	0.02	0.065 (13)	5.0
Lead	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1 (13)	0.6
Mercury	-	-	-	< 0.0004	0.0002 (7)	0.02
Nickel	< 0.03	< 0.03	< 0.03	< 0.03	0.085 (13)	5.0
Silver	-	-	-	< 0.05	< 0.05 (7)	1.0
Zinc	0.33	0.01	0.06	0.05	0.201 (13)	5.0

Notes:

1. This information was obtained from the Eagle Metalcraft Self-Monitoring Report for their OCDDS discharge (Mailing No. 1, p. 000072).
2. This information was obtained from the OCDDS 1995 Analytical Data report (Mailing No. 1, p. 000109). The concentration values represent the maximum concentration readings recorded from January 30, 1995 to December 19, 1995 based on up to 13 composite samples. The number of measurements for each parameter is indicated in parentheses.
3. OCDDS effluent limitations represent maximum daily allowable concentrations as determined by composite samples (Mailing No. 1, p. 000045). The discharge limitations for total cadmium and total lead were based on USEPA electroplating discharge limits (Mailing No. 1, p. 000044).

paint and 300 to 350 gals per year of paint solvents/thinners (Mailing No. 1, p. 000006).

Renewal applications from 1987 for NYSDEC "Certificates to Operate an Air Contamination Source" were provided for the site's three emission points (Mailing No. 1, pp. 000098-000103). These renewal applications contain "toxicity analyses" which identify toluene and particulates as discharged contaminants. Annual emission rates of toluene ranged from 400 pounds (lbs) at the bake oven to 3,888 lbs at the two paint spray booths. The annual emission rate for particulates was 234 lbs at the two paint spray booths.

A letter from NYSDEC to Eagle Metalcraft dated April 1991 states that Eagle Metalcraft no longer had "to take any action to renew any expiring or expired Certificate(s) to Operate" as long as there are no changes to any of the emission sources (Mailing No. 1, p. 000104). It was not noted if the recently installed powder coating paint system or the use of water-based paints (Mailing No. 1, p. 000007) required an amendment to be made to the facility's emissions permits. It was also not noted whether the installation of a powder-coating paint system in 1996, or the gradual shift toward water-based paints that has been occurring since 1994, have resulted in changes in generated wastes.

- In the 1960s and early 1970s, "wood, cardboard, paint filters, and other similar wastes were periodically burned behind the plant after being soaked with paint wastes" (Mailing No. 2, p. 4). Eagle Metalcraft contends that "the solvents in the paint wastes were effectively destroyed by burning." They also noted that "there is no remaining evidence of the site of burning." Solvent burning was discontinued in the early 1970s upon request by the government, but a copy of a written request, if one exists, was not available at the time this Site Summary Report was written. Eagle Metalcraft noted that less than 200 gals per year of paint waste were disposed

behind the facility between 1962 (when the paint shop was first installed) and 1969 (Mailing No. 1, p. 000006 and Mailing No. 2, p. 5).

- Between the early 1970s and early 1980s, spent solvents were "poured in the backyard of the plant," the liquids were allowed to evaporate off, and the remaining residue was then accumulated and disposed off-site via the "same route as paint solids" (NYSDEC, 1998: 1982 Inspection Report, p. B). This on-site evaporation was discontinued, "apparently upon the advice of the DEC inspector" who performed a site inspection on September 2, 1982 (Mailing No. 2, p. 4 and NYSDEC, 1998). It was noted by Eagle Metalcraft that paint wastes were "poured onto a large telephone pole lying on the ground behind the facility . . . and allowed to evaporate." Eagle Metalcraft employee interviews revealed that paint wastes were also evaporated in paint cans and in an "approximately 4-foot square tray" in the rear of the facility. The NYSDEC inspector observed in 1982 that a gravel pile was used as another site of evaporation, but this was not confirmed by Eagle Metalcraft.

  It was noted in the September 2, 1982 NYSDEC inspection report that 160 lbs per month of paint solids were generated on-site, as well as 10 lbs per month of paint residue that was collected after liquid solvents were allowed to evaporate off. These wastes were disposed off-site as hazardous waste (waste code F017). Approximately 80 lbs per month of liquid solvents were evaporated in the backyard of the facility (NYSDEC, 1998: 1982 Inspection Report, p. B). The inspection report also noted that approximately 2 to 3 gals of liquid solvents were poured behind the facility for evaporation on a weekly basis. Eagle Metalcraft estimated that 200 to 300 gals per year of waste paints and solvents were disposed between 1970 and 1989 (Mailing No. 1, p. 000006 and Mailing No. 2, p. 5). Eagle Metalcraft was unable to locate disposal records for paint wastes and solvents prior to 1983.

  Regarding the off-site solids disposal facility used during this period, Eagle Metalcraft was not able to confirm their August 31, 1984 response to a NYSDEC

hazardous waste disposal questionnaire which stated that "spent - non-halogenated solvents - toluene - MEK [methyl ethyl ketone or 2-butanone] (evaporated prior to disposal) paint residue" was disposed at the Town of Dewitt Landfill in Onondaga County between October 1962 and December 1982 (Mailing No. 2, p. 3). Eagle Metalcraft does, however, assume this statement is correct. Both the aforementioned NYSDEC questionnaire and Eagle Metalcraft's 1984 response were not available for review at the time this Site Summary Report was written.

- Between 1983 and September 1989, Eagle Metalcraft generated approximately 200 to 300 gals per year of leftover paint and waste paint solvents (Mailing No. 1, p. 000006). This material originated from the cleaning of the facility's paint guns and hoses, and was stored in 55-gallon drums until they could be hauled off-site for disposal. The storage location for these drums was not indicated. Spill prevention measures, if any, were not specified. To the best of Eagle Metalcraft's knowledge, these waste solvents were "hauled away by authorized waste haulers/handlers" and "either recycled and/or incinerated" off-site (Mailing No. 1, p. 000007). Hazardous waste manifests for the off-site shipments of this material were provided by Eagle Metalcraft (Mailing No. 1, pp. 000112-000130) and are summarized in Table 2 at the end of this section. The manifests noted that the paint waste and waste paint solvents/thinners were flammable and contained MEK and toluene, with the bottom of each 55-gallon drum typically containing 1-2 inches of sludge and/or paint residues (Mailing No. 1, p. 000007). Waste composition summaries were not provided.

- In September 1989, a solvent distillation unit was purchased to recycle used solvent wastes and to remove solvents from leftover paint. After the integration of this unit into the manufacturing system, the "only hazardous waste left after the distilling process are 'still bags' containing small amounts of paint resins and paint pigments. These still bags are currently accumulating in a half-full 55-gallon drum and will eventually have to be disposed of by a qualified waste handler" (Mailing No. 1, p.

000006). An inspection was conducted by NYSDEC on January 26, 1993 during which Eagle Metalcraft was found to be in compliance with New York State Hazardous Waste Regulations for a conditionally exempt small quantity generator of hazardous waste (Mailing No. 1, pp. 000131-000161). Thus, at the time of the inspection, Eagle Metalcraft generated less than 100 kilograms (kg) per month of hazardous wastes and stored less than 100 kg (Mailing No. 1, p. 000138). It was also observed during the 1993 NYSDEC inspection that hazardous waste consisting of still bottom bags was being generated on-site from painting operations (Mailing No. 1, p. 000139). Three 5-gallon buckets of still bottom bags (approximately 20 lbs each) had accumulated from October 1988 until September 1996, which was the date of Eagle Metalcraft's first mailing (Mailing No. 1, pp. 000006, 000140). As noted earlier, waste composition summaries were not provided for the current or historic generated wastes, however, Eagle Metalcraft did note that their paint waste and waste paint solvents contained MEK and toluene, and are flammable (Mailing No. 1, p. 000007).

- Non-hazardous solid wastes, including paint filters, paint cans, rags, cardboard, and office trash have been removed from the facility by Rubbish Removal, Inc. since at least 1962 when the painting system was installed (Mailing No. 2, p. 2). Eagle Metalcraft was unable to locate records of non-hazardous solid waste disposal prior to 1962.

- Cutting oil is generated on-site and has been recycled at Bison Waste Oil in Buffalo, New York. The quantity of waste oils produced was not indicated in Eagle Metalcraft's submittal, and they have not been able to identify any other recycling facilities that have been used (Mailing No. 2, p. 2).

- Scrap metal is generated on-site and has been recycled at Fulton Scrap Processors, Inc. in Fulton, New York. The quantity of scrap metals produced was not indicated

in Eagle Metalcraft's submittal, and they have not been able to identify any other recycling facilities that have been used (Mailing No. 2, p. 2).

- Sanitary wastewater is discharged from this facility to the OCDDS system through the facility's Sewer No. 1. This discharge is authorized under the same OCDDS Industrial Wastewater Discharge Permit (Permit No. 25) as the process waste discussed earlier in this section (Mailing No. 1, pp. 000018-000038). Table 1 shows measured metal concentrations for the facility's discharge (both sanitary and industrial wastewaters) into the OCDDS system (Mailing No. 1, pp. 000070-000096, 000109).

Table 2, which is located at the end of this section, provides a summary of the types of hazardous and industrial wastes that have been generated on-site, as well as estimates of the disposal quantities and names of the disposal locations.

Facility Permits

Facility discharge permits were issued for the discharge of wastewater into the sanitary sewer system (OCDDS) and for air emissions (NYSDEC).

OCDDS Industrial Wastewater Discharge Permit No. 25 which was valid between June 14, 1993 and June 14, 1996, authorized Eagle Metalcraft to discharge both sanitary wastewater and pretreated industrial wastewater that was generated from metal finishing and electroplating processes through the facility's Sewer No. 1 to the county sanitary sewer system (Mailing No. 1, pp. 000018-000038). Eagle Metalcraft submitted a draft version of the facility's subsequent OCDDS permit (Mailing No. 1, pp. 000039-000068), and a letter from OCDDS which extended the permit's expiration date until the new permit could be executed (Mailing No. 1, p. 000069). Copies of required self-monitoring reports are kept on file at the facility and, it was noted in their submittal, are available for inspection upon

request (Mailing No. 1, p. 000006). Only the most recent report was available for review at the time this Site Summary Report was written.

A NYSDEC air emissions permit (Permit No. 7-3126-00030/00001-0) was issued for three emission points, including two spray paint booths and a batch-type bake oven used by the painting department (Mailing No. 1, p. 000006). The most recent NYSDEC Certificates to Operate Air Contamination Sources were submitted (Mailing No. 1, pp. 000098-000103), as well as an April 1991 NYSDEC letter serving as an interim Certificate to Operate for expiring or expired sources (Mailing No. 1, p. 000104), and a September 14, 1995 NYSDEC Modification Permit for "capping out" the three emission points (Mailing No. 1, pp. 000105-000108). The modification includes federally-enforceable special conditions, including a limitation of less than 10 tons of volatile organic compounds (VOCs) in emissions over any consecutive 12-month period.

Table 2: Summary of Generated Wastes

Waste Type	Est. Annual Quantity	Date or Period of Disposal	Disposal Site
Waste Paint Sludge, Paint Residues, and Paint Solvents (Mailing No. 1, p. 000008)	negligible[1,3]	1953-1961	-
	< 200 gals[1]	1962-1969	Town of Dewitt Landfill, NY & on-site burning
	200-300 gals[1]	1970-1982	Town of Dewitt Landfill, NY & on-site evaporation
	330 gals	1983	Haz-o-waste Corp., NY
	55 gals	1984	Haz-o-waste Corp., NY
	165 gals	1984	Solvents Recovery Service of NJ, Inc.
	165 gals	1985	Solvents Recovery Service of NJ, Inc.
	55 gals	1985	Solvents & Petroleum Service, Inc., NY
	165 gals	1986	Solvents Recovery Service of NJ, Inc.
	110 gals	1986	Solvents & Petroleum Service, Inc., NY
	220 gals	1987	Solvents & Petroleum Service, Inc., NY
	330 gals	1988	Solvents & Petroleum Service, Inc., NY
	< 4 gals[4]	1989 - present	Waste is accumulating on-site
Paint Filters, Paint Cans, Rags, Cardboard & Office Trash (Mailing No. 2, p. 2)	unspecified[2,3]	1953 - present	Rubbish Removal, Inc.
Waste Cutting Oil (Mailing No. 2, p. 2)	unspecified[2]	1953 - present	Bison Waste Oil, NY
Scrap Metal (Mailing No. 2, p. 2)	unspecified[2]	1953 - present	Fulton Scrap Processors, Inc., NY

Notes:

1. Eagle Metalcraft's waste quantity estimates were provided on page 5 of Mailing No. 2, however, no records for waste generation have been maintained prior to 1983.
2. The generated quantities of these types of wastes were not specified (Mailing No. 2, p. 2).
3. Little if any paint-related wastes were likely generated prior to 1962 (Mailing No. 2, p. 4).
4. Since the purchase of a solvent distillation unit (September 1989), the still bags of waste which contain paint resins and paint pigments, have been accumulating in a 55-gallon drum which is approximately half-full (as of 1996).

3.0 POTENTIAL PATHWAYS FOR RELEASE OF HAZARDOUS SUBSTANCES TO THE LAKE SYSTEM

3.1 Soil

Soil on the Eagle Metalcraft site can be contaminated directly from on-site waste disposal and spills that occur during chemical and waste storage and handling. Eagle Metalcraft indicated in their first mailing that, to the best of their knowledge, "no hazardous or industrial waste was ever released into the environment" at their facility other than those releases for which they "have permits to do so" (Mailing No. 1, p. 000009).

In Eagle Metalcraft's second mailing, environmental releases were identified which occurred over approximately a 20-year period. From 1962 to the early 1970s, cardboard, wood, and paint filters were "periodically burned behind the plant after being soaked with paint wastes." While this may have volatilized a portion of the solvents in the paint, producing contaminated air emissions, it can be expected that a substantial quantity of paint waste was also absorbed by the soil. It was not noted whether a lighter fluid was used for ignition. Eagle Metalcraft also indicated that they poured paint waste behind their facility from the 1970s until the early 1980s to evaporate the liquid solvents and decrease the quantity of wastes that were to be disposed off-site. It was noted that paint waste and waste paint solvents were poured onto a "telephone pole" and, although the "intent was to pour the paint wastes only on the pole, some drippage likely was inevitable" (Mailing No. 2, p. 4). Eagle Metalcraft indicated that the pole was possibly later buried on-site. A NYSDEC 1982 inspection report stated that, at that time of the inspection, the facility was using a "gravel pile" as a location for solvent evaporation (NYSDEC, 1998: 1982 Inspection Report, p. B). This gravel pile was not recalled by Eagle Metalcraft employees, however, "current employees recollect evaporating paint wastes in cans and in an approximately 4-foot square tray."

Since the facility discontinued its on-site waste burning operation in the early 1970s, and off-site paint waste shipments were not made until January 26, 1983 (Mailing No. 1, p. 000112), on-site "disposal" by evaporation can be expected to have occurred for approximately ten years. Although the exact type of paint waste/solvent disposal method that was used by Eagle Metalcraft behind the Burnet Avenue facility seems to have varied, it is apparent that paint waste was applied to the soil from 1962 to 1982. The only estimate of the quantity of waste that was disposed by evaporation/land application behind the facility in 1982 was 2 to 3 gals per week, or approximately 100 to 150 gals per year (NYSDEC, 1998: 1982 Inspection Report, p. B). The total quantity of paint waste that was generated prior to 1969 was estimated to be less than 200 gals per year, and between 200 and 300 gals per year between 1970 and 1982 (Mailing No. 2, p. 5). The actual percentage of generated wastes that were disposed behind the facility was not specified.

It was stated in Eagle Metalcraft's second mailing that there is currently no evidence of paint waste disposal that is visible on their property (Mailing No. 2, p. 5). The current condition of the area behind (south of) the site's building is not apparent on the submitted facility map (Figure 3) and may currently be paved or filled. Eagle Metalcraft assumes that their paint waste burning (early 1960s to early 1970s) and evaporation (early 1970s to early 1980s) would have been done within a 10 to 30 ft range between their building and the southern property boundary (Mailing No. 2, p. 5). In their second mailing, Eagle Metalcraft stated that their property is located in a flat area with clayey soil that does not drain well (Mailing No. 2, p. 5). This has not been verified because soil boring results were not provided by Eagle Metalcraft for their site. Also, according to Eagle Metalcraft's second mailing (p. 5), environmental analytical data have not been generated.

3.2 Surface Water

The Eagle Metalcraft facility is located approximately 4.7 miles east of the southeastern shore of Onondaga Lake, and less than 1,000 feet west of the South Branch of Ley Creek,

as shown on Figure 1 herein. The adjacent area of the South Branch of Ley Creek is approximately 6.8 miles upstream of Onondaga Lake. Contaminated stormwater runoff from this facility is a potential source of pollutants to off-site surface waters. Preventive measures to limit runoff contamination, if any, were not identified in the mailings.

As noted in Section 1.4, stormwater runoff leaves the site towards a gutter located near the northern property line along the south side of Burnet Avenue, as well as towards a wetland area near the southern property line and adjacent properties. Eagle Metalcraft is not aware of any changes in stormwater runoff patterns since they began operation at the site (Mailing No. 2, p. 6). The asphalt gutter that runs parallel to Burnet Avenue is shown on the submitted facility map (Figure 3) but the wetlands area is not. If the wetland is, in fact, isolated as noted on page 5 of Mailing No. 2, then runoff exiting from the wetlands area would be minimal and water would be expected to either evaporate or infiltrate into soil/groundwater. It is also possible that drainage from this wetland area flows to the east to the nearby South Branch of Ley Creek.

Outdoor materials storage and handling facilities may serve as sources of off-site contamination if stormwater comes into contact with stored or spilled contaminants. The facility map (Figure 3) shows a blacktop parking lot on the north side of the building and no other current outdoor facilities, except for two loading areas. Since the facility's loading/unloading operations were not described in the Eagle Metalcraft mailings, their environmental impacts, if any, cannot be assessed. During Eagle Metalcraft's discussion of waste evaporation, it was indicated that the telephone pole mentioned earlier most likely was situated in the rear of the facility, near what they referred to as a "paint storage area" (Mailing No. 2, p. 4). The location of this outdoor paint storage area was not indicated on the facility map, and it was not noted whether it was situated on an impervious base, if it is still in use, or the quantity of paint that has been stored there. This paint storage area could be a potential source of surface water runoff contamination.

Exposed areas of contaminated soil can also be sources of contamination to surface water as noted in Section 3.1. Historically, an unspecified location(s) behind the facility was set aside for paint and solvent burning (early 1960s to early 1970s), and for paint and solvent evaporation (early 1970s to early 1980s). These disposal activities likely contributed to contamination of the soil with such pollutants as MEK and toluene (Mailing No. 1, pp. 000112-000130). Waste composition summaries were not provided for the paint waste and waste paint solvents/thinners that were disposed on-site.

During winter months and periods of heavy rainfall, Eagle Metalcraft indicated that stormwater accumulates in the facility's parking areas due to clayey, impermeable soils (Mailing No. 2, p. 5). This indicates that contaminants in surface soil could be susceptible to off-site migration via stormwater runoff, as opposed to soil infiltration.

Eagle Metalcraft did not provide a copy of a SPDES permit for their facility, and did not state whether such a permit was ever required. There was no indication in the mailings that industrial wastewater was ever discharged to on-site or off-site surface waters.

3.3 Groundwater

Eagle Metalcraft did not provide any groundwater data for this site. Groundwater beneath the Eagle Metalcraft site can be contaminated directly from leaching of contaminants from the facility's storage and disposal activities. Eagle Metalcraft originally stated that to the best of their knowledge, there have never been any accidental hazardous or industrial waste releases into the environment (Mailing No. 1, p. 000009). In their second mailing, this statement was amended to make it only refer to post-1983 site activities, and a description was provided of the on-site paint and solvent waste disposal methods prior to 1983 (Mailing No. 2, pp. 3-4). The additional information noted that unspecified locations behind the facility were set aside for paint and solvent burning (early 1960s to early 1970s), and for paint and solvent evaporation (early 1970s to early 1980s). The only loading rate estimate

that was provided for paint waste and waste paint solvents disposal was 2 to 3 gals per week. These disposal methods were discussed in detail in Section 2.3. Assuming there have been no other releases (i.e., rinse tank overflow water, waste oil), it may be inferred that the material historically disposed on-site is this facility's only potential source of contamination to groundwater.

3.4 Air

Air emissions represent a local source of contaminants to the atmosphere with potential deposition to the ground surface and subsequent transport to the South Branch of Ley Creek via surface runoff. As noted earlier, the facility currently operates three air emission sources (two spray paint booths and one oven) which operate under a NYSDEC permit. This permit will remain valid as long as the emission sources are not changed (Mailing No. 1, pp. 000098-000104). It was not indicated where in the facility these emission points are located, or whether the emission rates have varied significantly between 1962 and 1987. NYSDEC Notices of Violations, if any, were not submitted for the facility. The batch-type bake oven and first spray booth were installed in 1962, and the second spray booth was installed several years later, most likely in 1969, when the paint shop was "expanded" (Mailing No. 2, p. 4). Based on the April 6, 1987 Certificates to Operate an Air Contamination Source, the regulated air contaminants are particulates and toluene. The burning and evaporation of waste paint solvents and paint waste between 1962 and 1983, as noted in Section 2.3, was another source of air contamination for the facility.

3.5 County Sewer System

Based on the facility's OCDDS discharge permit (Mailing No. 1, pp. 000018-000038), Eagle Metalcraft discharges industrial wastewater from electroplating and metal finishing operations, as well as sanitary wastewater through Sewer No. 1 into the OCDDS system for treatment at the Metropolitan Syracuse Wastewater Treatment Facility. This permit was

valid between June 14, 1993 and June 14, 1996. Eagle Metalcraft also submitted the draft version of the facility's subsequent OCDDS permit (Mailing No. 1, pp. 000039-000068), and a letter from OCDDS which extends the permit's expiration date until the new permit could be executed (Mailing No. 1, p. 000069). Although OCDDS permits prior to 1993 were not provided, Eagle Metalcraft indicated that the "only discharge of the wastewater associated with our cleaning/prepaint process has always been directly into the sanitary sewer" (Mailing No. 1, p. 000010). The locations of the piping connections from the facility to the municipal sewer system were not indicated.

The only wastewater effluent quality data that was provided was a 1996 OCDDS self-monitoring report (Mailing No. 1, pp. 000070-000096) and a 1995 OCDDS Analytical Data report (Mailing No. 1, pp. 000109-000111). Metal concentrations data from these two reports are presented in Table 1. These and all other measured parameters in the submitted data reports were found to be below OCDDS concentration limits. Four flowrate measurements for the effluent were noted which ranged from 3.8 to 11.3 gpm, with an average of 8.6 gpm (Mailing No. 1, p. 000073). Other biannual OCDDS self-monitoring reports are kept on file at the facility and are available for inspection upon request (Mailing No. 1, p. 000006). As noted earlier, the OCDDS permits state that the metal finishing and electroplating wastewaters were to be pretreated before discharge (Mailing No. 1, pp. 000022, 000042), but Eagle Metalcraft stated that the effluent has not been pretreated but still has consistently been within permit guidelines (Mailing No. 1, p. 000010). Notices of violation of the OCDDS permit, if any, were not submitted.

Eagle Metalcraft stated that there are no storm sewer conveyances constructed on the site. Stormwater runoff drains into a Burnet Avenue gutter to the north, an adjacent isolated wetland to the south, and into adjacent properties. It was not indicated whether it is possible that some stormwater runoff drains into municipal storm sewers on the adjacent properties, or via the gutter system.

4.0 LIKELIHOOD OF RELEASE OF HAZARDOUS SUBSTANCES TO THE LAKE SYSTEM

4.1 Documented Releases

Documented Spills

It was indicated in Eagle Metalcraft's first mailing that, to the best of their knowledge, there has never been an unpermitted release of hazardous or industrial waste into the environment at their facility (Mailing No. 1, p. 000009). The second mailing indicated that at least one unspecified location behind the facility was set aside for paint and solvent burning (1962 to early 1970s), and for paint and solvent evaporation (early 1970s to early 1980s). These disposal methods resulted in direct contaminant discharges into the soil and air. Waste composition summaries were not provided for either the paint waste or waste paint solvents/thinners.

Based on employee interviews, Eagle Metalcraft determined that during the 1960s and early 1970s, "wood, cardboard, paint filters, and other similar wastes were periodically burned behind the plant after being soaked with paint wastes" (Mailing No. 2, p. 4). Eagle Metalcraft assumes that the "solvents in the paint wastes were effectively destroyed by burning." Solvent burning was discontinued in the early 1970s upon request by the government. No additional information regarding this disposal process has been provided. While the process of burning paint waste may have volatilized a portion of the solvents in the paint, it can be expected that a substantial quantity of fuel (paint waste) was absorbed by the soil over this ten-year period. Furthermore, it was not noted whether lighter fluids were typically used to facilitate ignition thereby creating another potential source of soil contamination.

After the burning of paint wastes and solvents was discontinued, Eagle Metalcraft poured generated paint wastes behind their facility to allow the chemicals to evaporate. There were varying reports regarding the exact location of the evaporation activities. In Eagle Metalcraft's second mailing, it was noted that the paint wastes were poured onto a "large telephone pole lying on the ground behind the facility" (Mailing No. 2, p. 4). Eagle Metalcraft also noted that although "the intent was to pour the paint wastes only on the pole, some drippage likely was inevitable. It is unclear when this practice was discontinued, but because there was no reference to it in the 1982 inspection report, it appears to have stopped by then." The inspection referred to in this quote was conducted by NYSDEC on September 2, 1982 (NYSDEC, 1998). NYSDEC noted in their 1982 inspection report that the facility was using a gravel pile for disposal. A gravel pile was not recalled by Eagle Metalcraft employees, however, "current employees recollect evaporating paint wastes in cans and in an approximately 4-foot square tray." The pole is no longer present on-site, and Eagle Metalcraft believes it was located near their "paint storage area." The pole was later removed from the site or buried on-site (Mailing No. 2, p. 4). As noted earlier, the location of this outdoor paint storage area was not shown on their facility map (Figure 3), and it was not indicated whether it was situated on an impervious base, if it is still in use, or the quantity of paint that was stored there.

The only estimate of the quantity of waste that was disposed behind the facility was 2 to 3 gals per week or approximately 100 to 150 gals per year (NYSDEC, 1998: 1982 Inspection Report, p. B). Eagle Metalcraft noted that there is currently no evidence of historical waste burning or evaporation on their property, however, the current physical condition of the area on the southern portion of the site was not described and is not apparent on the submitted facility map. This area may currently be paved or filled.

Ongoing/Recent Releases

As discussed in Sections 2.3, 3.4, and 3.5, the Eagle Metalcraft facility has ongoing permitted releases from three on-site air emissions sources (two spray paint booths and one batch-type bake oven), as well as industrial and sanitary wastewater releases into the OCDDS sanitary sewer system.

The most recent unregulated environmental discharges that were noted in the submitted mailings involved the on-site disposal of paint waste and waste paint solvents that began in 1962 when the painting system was installed, and continued until 1982. These wastes were disposed by burning or evaporation, and likely resulted in some spilling onto the soil. From 1983 to 1989, solvents and other paint wastes were disposed off-site. In September 1989, Eagle Metalcraft purchased a "solvent distilling unit to recycle . . . solvent wastes and remove any solvents from leftover paint" which decreased the quantity of hazardous wastes generated (Mailing No. 1, p. 000006).

4.2 Threat of Release to the Lake System

4.2.1 Extent of Site Contamination

Based on the material submitted, the only potential on-site contamination exists behind the facility, within the 10 to 30 ft between the main building and the southern property line. It was indicated in the NYSDEC September 2, 1982 inspection report that approximately 2 to 3 gals per week of paint wastes were being poured on-site. This waste was either evaporated or burned, transported off-site by stormwater runoff, or absorbed into the soil. It is likely that paint/solvent wastes were continuously disposed in this manner from 1962 until the NYSDEC inspection in 1982. The company did not provide data to assess the extent of on-site contamination and off-site migration. It is recommended that limited sampling be performed to determine the extent of contamination, if any, including soil borings, surface

water and sediment samples from the wetland area, and/or groundwater samples. Sampling could be extended off-site (e.g., South Branch of Ley Creek) should there be evidence of on-site contamination.

Soil

Paint waste and waste paint solvents were regularly disposed behind the facility for approximately twenty years (1962 to 1982). Although a portion of the wastes was either burned or evaporated during this time, it is likely that a portion of the mass of contaminants accumulated in on-site soils. Soil sampling data was not provided. Soil samples should be analyzed before a complete environmental assessment of soil contamination can be made.

It can be assumed that since the overall nature of Eagle Metalcraft's paint and solvent "waste streams have remained essentially the same since 1962," the waste's composition has not changed significantly (Mailing No. 2, p. 2). The paint waste and waste paint solvents (classified as hazardous wastes based on ignitability) which were shipped off-site between 1983 and 1989 (Mailing No. 1, pp. 000112-000130) contained MEK and toluene, with the bottom of each drum typically containing 1 to 2 inches of sludge and/or paint residues (Mailing No. 1, p. 000007). Therefore, it can be assumed that the land-disposed wastes contained similar materials. Composition data of land-disposed wastes were not provided.

Groundwater

Although groundwater sampling was not conducted, it is likely that the presence of an on-site disposal area in use for approximately twenty years has contaminated the groundwater beneath the Eagle Metalcraft site by the leaching of contaminants, including volatile organic compounds. The depth to the water table and the direction of groundwater flow was not indicated. If the groundwater flow is consistent with surface contours (see Figure 2), then

surficial groundwater will be moving to the east and southeast, toward the South Branch of Ley Creek.

Surface Water/Sediment

A wetland area exists adjacent to the southern border of the property which receives runoff from the Eagle Metalcraft facility (Mailing No. 2, p. 5). Runoff from the facility also has the potential to flow to the north into the Burnet Avenue drainage system or to the east into the nearby South Branch of Ley Creek. Sediment and surface water sample results from these three runoff receiving areas were not provided by Eagle Metalcraft. The historical soil contamination discussed earlier (paint waste and waste paint solvent disposal) and on-site outdoors materials storage areas serve as potential sources of stormwater runoff contamination to off-site locations. Although the wetland area was noted as being isolated, pollutants that had been discharged to this area from the facility can still be transported from the wetland soils/sediments to adjacent properties via stormwater overflow during storm events. Wetland water retention times and water surface areas can influence the rate of contaminant removal by such processes as sedimentation and decomposition (Hammer, 1992), however, this information as well as a map of the wetland area were not provided. A SPDES permit was also not provided for this site and it was not noted whether one has ever been issued. There is no indication that industrial wastewater was ever directly released to surface waters.

In 1997, NYSDEC collected a sediment sample in the South Branch of Ley Creek, immediately upstream (less than 100 ft) of Burnet Avenue, approximately 600 ft from the Eagle Metalcraft site at Station SL-110. In 1996, NYSDEC collected a sediment sample in the South Branch of Ley Creek, approximately 500 ft downstream of Burnet Avenue, adjacent to the Bristol-Myers Thompson Road facility (Site ID 268) at Station L-27. As previously noted, methyl ethyl ketone (MEK) and toluene were components of the paint/solvent wastes disposed on the Eagle Metalcraft site. MEK was detected in sediment

at stations SL-110 (adjacent to Eagle Metalcraft) and L-27 (downstream of Eagle Metalcraft), at concentrations of 26 µg/kg (ppb) and 12 µg/kg, respectively. There is currently no NYSDEC sediment standard or guidance value for MEK (NYSDEC, 1999). The NYSDEC recommended soil cleanup objective for MEK is 300 µg/kg (NYSDEC, 1994). Toluene was not detected (less than 20 µg/kg) in sediment at these two locations. Based on these data, it is possible that the Eagle Metalcraft site is a source of MEK to the South Branch of Ley Creek.

Sewer Discharges

According to Eagle Metalcraft, the wastewaters associated with the facility's cleaning/prepainting process have always been discharged to the OCDDS sanitary sewer system (Mailing No. 1, p. 000010). No OCDDS Notices of Violation were provided and it was indicated that the discharges to the sanitary sewer were "consistently within the guidelines of the permits" (Mailing No. 1, p. 000010). Wastewater concentration data were provided for 1995 (thirteen days) and 1996 (four days) and are summarized in Table 1. During this time, the OCDDS limits for metals and pH were not violated (Mailing No. 1, pp. 000044-000045).

4.2.2 Migration Potential of Contaminants

Eagle Metalcraft has indicated that the paint solvents and waste paint sludge that they have been generating on-site since 1962 contain toluene and MEK, based on information contained in the submitted hazardous waste manifests (Mailing No. 1, pp. 000112-000130). These waste products are of particular interest at this site because they were disposed over a period of approximately twenty years on-site, either by burning, evaporation, or land disposal. The wastes may then be susceptible to off-site migration by runoff, leaching, or air transport.

Of all the waste generated at the facility, the wastes disposed in the on-site disposal area have the greatest potential for migration into groundwater and the lake system. If the ground is predominantly clayey as noted by Eagle Metalcraft (Mailing No. 2, p. 5), then surface water runoff is the likely means of off-site contaminant transport. If this is not the case, then infiltrating water traveling through contaminated soil into groundwater will likely reach the South Branch of Ley Creek since it is less than 1,000 ft downgradient from the site. However, as indicated by Eagle Metalcraft, "no environmental analytical data has been generated" (Mailing No. 2, p. 5).

Descriptions of the site's materials storage facilities and handling procedures were not provided, except for the brief mention of an on-site paint storage area. Inadequate storage and handling procedures could present an additional risk of on-site contamination. Eagle Metalcraft indicated that they have not had any environmental releases other than the permitted releases to the sanitary sewer and atmosphere as well as the historic on-site disposal (burning and evaporation) of paint and solvent wastes (Mailing No. 1, p. 000009 and Mailing No. 2, p. 2).

5.0 POTENTIAL FOR ADVERSE IMPACTS TO LAKE SYSTEM DUE TO A RELEASE OR THREAT OF A RELEASE

5.1 Hazardous Substance Characteristics

The only hazardous wastes that Eagle Metalcraft indicated it has generated are paint solvents and waste paint sludge. Hazardous waste manifests were provided for disposal shipments that were made between 1983 and 1989. This material was likely discharged into on-site soil when paint waste was being burned behind the facility between 1962 and the early 1970s, and was evaporated between the early 1970s and September 1982. The details of the burning process were not provided and it is possible that the waste could have been poured onto the ground beforehand. Wastes that were disposed by evaporation were discharged behind the facility onto one or more of the following: a gravel pile; a telephone pole; cans; and a "4-foot square tray" (Mailing No. 2, p. 4). Waste composition summaries were not provided. The manifests noted that these wastes contained methyl ethyl ketone (MEK) and toluene in unspecified concentrations (Mailing No. 1, pp. 000112-000130). Without additional information on waste characteristics and environmental data, it cannot be stated whether MEK and toluene (or other parameters) should be considered contaminants of concern. Furthermore, the presence of both MEK and toluene was only noted in the aforementioned hazardous waste manifests which spanned a six-year period over ten years ago (January 26, 1983 to October 7, 1988). Other components of Eagle Metalcraft's wastes were never specified except for toluene which was noted to be present in facility air emissions (Mailing No. 1, pp. 000098-000103).

Wastewater sampling that was conducted for the facility's effluent discharge into the OCDDS sanitary sewer system revealed there were no permit violations in 1995 and 1996. Table 1 herein contains the wastewater's metal concentrations data for this period. Other wastewater quality data, including volatile organics, were not provided. Subsurface environmental data (e.g., soil, groundwater, and wetland sediments) and a detailed

description of the on-site disposal area were also not available at the time this Site Summary Report was written. Further investigations should be conducted to characterize the area of contamination on the Eagle Metalcraft property.

A discussion of hazardous substance characteristics for the potential contaminants of concern, MEK and toluene, is provided below. The likely pathways of release for these contaminants into the Onondaga Lake system include surface water runoff to the South Branch of Ley Creek, air emissions, wind transport of exposed particulate waste such as dried or flaked-off paint waste, and the leaching of pollutants from the on-site land disposal area into groundwater.

Mobility

Volatile organic compounds (VOCs), including BTEX compounds such as toluene, volatilize into the atmosphere where photooxidation produces hydrochloric acid, carbon monoxide, carbon dioxide, and carboxylic acid. In surface waters, dissolved VOCs will rapidly volatilize into the atmosphere where photooxidation will occur. In soil, VOCs are considered mobile under most subsurface conditions and will readily leach into groundwater. Solubilities for many VOCs, including toluene, are relatively high, resulting in generally high mobility in groundwater.

MEK is a liquid that evaporates when exposed to air and dissolves when mixed with water. When released into soil, MEK tends not to bind well to the soil and may leach into groundwater. MEK released into soil may also evaporate into the atmosphere to a moderate extent. In water, this material may biodegrade and also may evaporate to a moderate extent. In water, MEK is expected to have a half-life of between 10 and 30 days (JTBaker, 1998). When released into the air, MEK is expected to be readily degraded and has a half-life of between 1 and 10 days.

Toxicity

Toluene is not classified as a carcinogen in humans or animals. Chronic exposure to toluene can affect the liver, kidneys, and central nervous system. Short-term exposure to low or moderate concentrations of toluene, such as in the workplace, can produce fatigue, confusion, general weakness, memory loss, nausea, and loss of appetite (USPHS, 1989). These short-term symptoms disappear when exposure is stopped. Toluene is highly flammable.

MEK is not classifiable as to human carcinogenicity because there are currently no human carcinogenicity data and inadequate animal data (IRIS, 1993). MEK is not expected to be toxic to aquatic life. Chronic exposure to MEK may cause central nervous system effects, and prolonged skin contact with MEK may defat the skin and produce dermatitis. The inhalation of MEK can cause nose and throat irritation, and high concentrations may cause headache, dizziness, nausea, numbness in fingers and toes, shortness of breath, vomiting, and unconsciousness. MEK can also enter the body when consumed with contaminated water or absorbed through skin contact. Ingestion may produce abdominal pain and nausea, and skin contact may cause irritation to the skin. It is not likely to remain in the body due to its breakdown and removal in expired air. MEK is highly flammable.

Persistence

In surface waters and near-surface soils, VOCs, including toluene, will predominantly volatilize into the atmosphere where they rapidly degrade. In subsurface soils where volatilization does not readily occur, VOCs are much more persistent. VOCs will also leach from soils into groundwater. Once in groundwater, VOCs will not readily volatilize and are relatively persistent.

In surface waters and near-surface soils (where MEK is exposed to air), MEK evaporates into the atmosphere where it is degraded to other chemicals. When exposed to water, MEK will dissolve readily. As MEK does not bind well to soil, MEK can move through the ground and enter groundwater.

Bioaccumulation

Toluene has not been found to bioaccumulate (USEPA, 1979) and MEK is not expected to significantly bioaccumulate (JTBaker, 1998).

5.2 Quantity of Substances

Eagle Metalcraft estimated that a total of 200 to 300 gals of waste paints and solvents were generated annually between 1970 and 1989, and an unspecified amount less than 200 gals per year was generated between 1962 and 1969 (Mailing No. 2, p. 5). Eagle Metalcraft did not provide estimates of the quantity of wastes that were disposed on-site. A NYSDEC inspection report dated September 2, 1982 noted that approximately 2 to 3 gals of solvents were being poured behind the facility on a weekly basis. It is likely that a considerable portion of these wastes was disposed on-site via burning or evaporation prior to the 1982 NYSDEC site inspection. Since 1983, generated wastes have been disposed off-site. A summary of the quantities of wastes that have been generated on-site (based on material provided by Eagle Metalcraft) is included in Table 2.

5.3 Levels of Contaminants

A discussion of the extent of on-site contamination is included in Section 4.2. Limited analytical data were provided in the two Eagle Metalcraft mailings. This includes wastewater data from samples collected prior to discharge to the OCDDS sewer system in 1995 and 1996. Concentrations of metals during this period are summarized in Table 1 and

were found to be within OCDDS standards. Toluene and MEK measurements in the wastewater samples were not provided.

5.4 Impacts on Special Status Areas

The Eagle Metalcraft site is situated in an area where direct adverse impact to wetlands or surface waters is likely to have occurred. The South Branch of Ley Creek near the site is a Class C water body with C standards (6 NYCRR Part 895.4).

According to the Syracuse East National Wetlands Inventory (NWI) map (USDOI, 1978), a federal wetland exists approximately 1,500 ft southeast and downgradient of the Eagle Metalcraft facility and is designated as $POWZ_X$ (Palustrine, Open Water, Intermittently Exposed/Permanent, Excavated). A rail line and the South Branch of Ley Creek are situated between the site and this federal wetland. There is also a federal wetland approximately 1,700 ft southwest and upgradient of the Eagle Metalcraft facility with the designation PEM1A (Palustrine, Emergent, Persistent, Temporary). This general area is also a New York State freshwater wetland with designation SYE 19. Thompson Road, a rail line, and I-690 are situated between the site and this federal and state wetland area. The nearest downgradient New York State freshwater wetland is located approximately 3,000 ft southeast of the site with the designation SYE 20. A rail line and I-690 are situated between the site and this state wetland. Groundwater contamination from the facility, if any, is likely to flow in an easterly direction toward the South Branch of Ley Creek based on USGS surface contours (Figure 2). The nearest downgradient New York State freshwater wetland along the South Branch of Ley Creek is located approximately 7,500 ft downstream and is designated SYE 29. Information on depth to groundwater and analytical groundwater data were not provided for the Eagle Metalcraft site.

Eagle Metalcraft indicated that an "isolated wetland created by the Thompson Road exit ramp from I-690" exists on the southern border of the property (Mailing No. 2, p. 5).

Although not shown on the NWI map, it is possible that this area could be classified as a federal wetland should a delineation be performed. As noted earlier, Eagle Metalcraft historically disposed paint and solvent wastes in this area.

As of August 1996, the New York State "Natural Heritage Sensitive Element" nearest to the Eagle Metalcraft facility was located approximately 0.5 miles southwest of the site, between I-690 and Erie Boulevard. Although this area is relatively close to the Eagle Metalcraft site, it is expected that runoff from the site would not reach the "Natural Heritage Sensitive Element" due to the presence of I-690.

Surface water and groundwater discharges from the site could adversely affect the adjacent wetland area, the downgradient regulated wetlands, and the South Branch of Ley Creek. Since there were no soil, groundwater, sediment, or surface water data pertaining to the site or the surrounding areas obtained by Eagle Metalcraft, further investigation is required to assess the extent of contamination. It should be noted that one of the potential contaminants of concern (MEK) was detected in sediment collected by NYSDEC in 1997 in the South Branch of Ley Creek adjacent to the site.

6.0 SUMMARY OF CONCERNS

Based on the data and information provided by Eagle Metalcraft, the following concerns are identified:

- Data are not available to assess the extent of on-site contamination and off-site migration due to the historic land disposal of paint waste and solvents. Soil borings, wetland surface water and sediment sampling, and groundwater sampling would enable a more complete environmental assessment to be conducted. A detailed description of the types and quantity of paint waste and solvents that were likely disposed on-site (including concentrations of chemical components) would also be necessary, if available.

- There is apparently an outdoors paint storage area which might serve as a potential source of contamination from spills or other releases. The location and description of this storage area, including any measures taken to prevent off-site contamination, were not indicated by Eagle Metalcraft. However, it was noted that there have not been any releases of hazardous or industrial wastes into the environment other than the permitted releases to the county sanitary sewer system and the atmosphere, as well as the historic on-site disposal (including burning and evaporation) of wastes.

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United States Department of Interior (USDOI), Fish and Wildlife Service. 1978. National Wetland Inventory Maps. Syracuse East, NY (1:24000).

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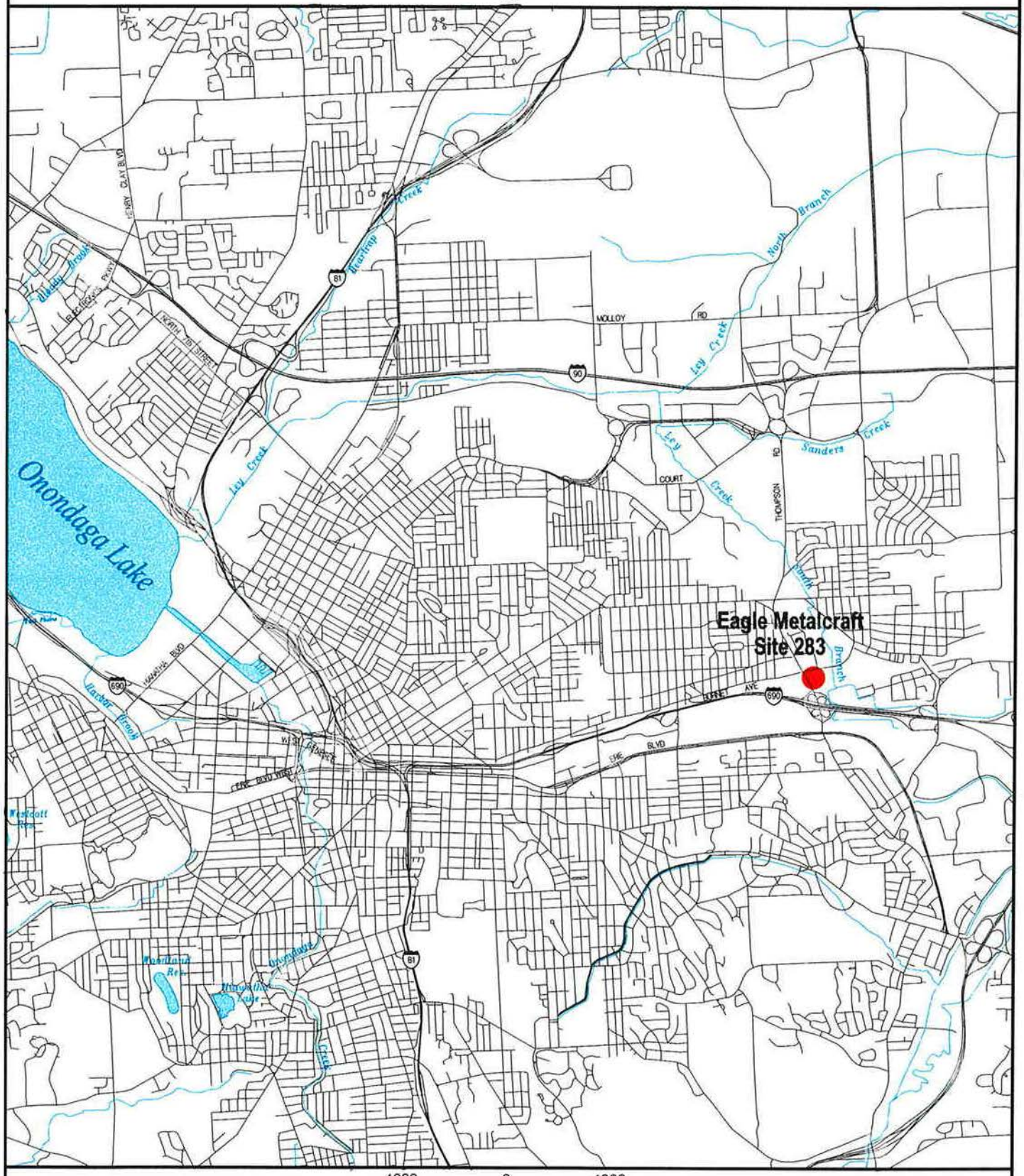
Site Location: Eagle Metalcraft, Inc.



Site Location with Site ID

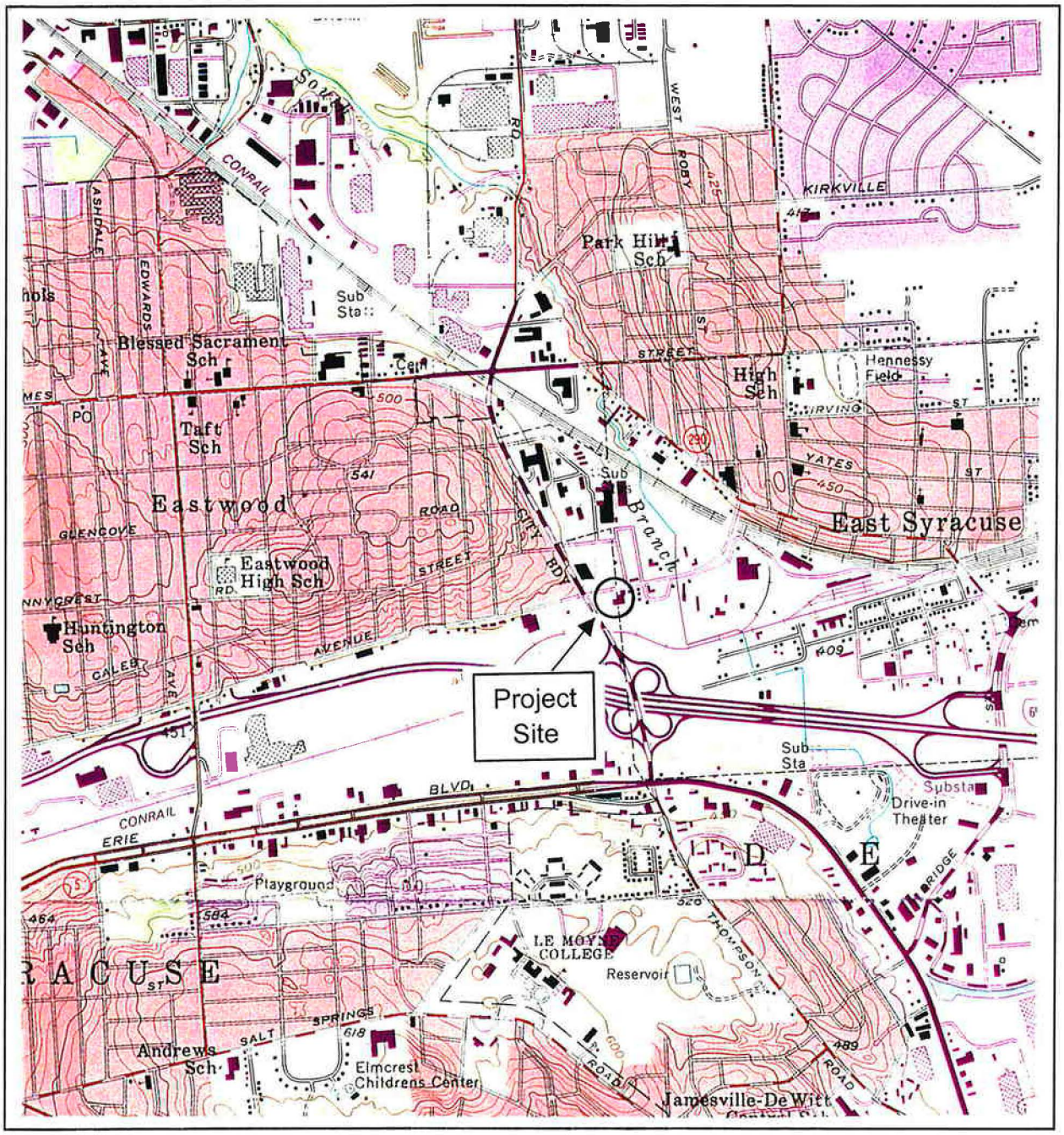
4000 0 4000
Scale in Feet

1600 0 1600
Scale in Meters

TAMS

N

Figure 1



SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

United States Geological Survey
Syracuse East Quadrangle
Onondaga County, New York

Figure 2

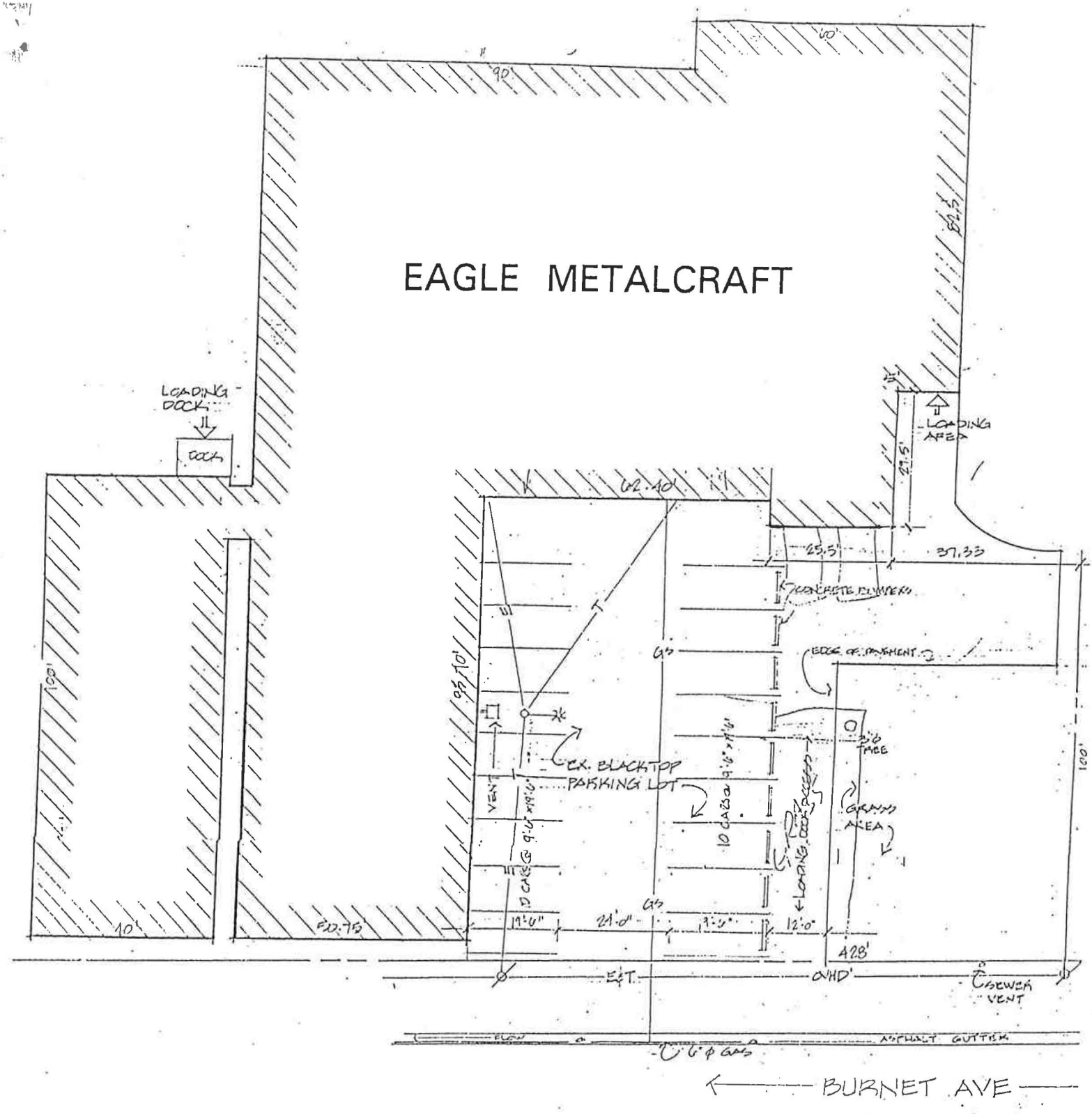


Figure 3

Source: **Eagle Metalcraft, Inc. Mailing No. 1**
p. 000017, September 18, 1996